

new subgenus, *EOSINICA*, which may be described as ovate-conic, radially ridged, interior smooth, terminating in a rounded protuberance and interior margin generally crenulated.

*GASTROCHÆNA STRIATULA* n. sp. Fig. 2.

Shell small, substance thin, ventral opening large, ovate anteriorly and pointed at posterior with its margin turned outward towards the anterior end of shell. The shell is pointed anteriorly, rounded posteriorly with surface closely concentrically striated. Widest part of valve 6 mm., length 10 mm.

*Locality.* Wood's Bluff, Ala. This specimen was found imbedded in a coral, and unfortunately was broken. The cavity is rounded and smooth. It is rather wider and shorter than usual in this genus.

Part of type in my collection, balance in State Museum.

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NEW PISIDIA.

BY V. STERKI.

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*Pisidium ohioense* n. sp.

Mussel minute, equipartite, well inflated, elliptical in outline; beaks in the middle, rather broad, rounded, prominent over the hinge line; superior margin little curved or almost straight, with slightly marked, rounded angles at the scutum and scutellum; the other margins rounded or the posterior subtruncate; surface somewhat shining, horn colored, very finely and irregularly striate, usually with a few coarser lines of growth; shell thin, translucent; nacre glassy-transparent, muscle insertions slightly marked; hinge fine, plate narrow, cardinal teeth fine, lamellar, the right slightly curved, abruptly thickened and bifid at the posterior end, the left anterior longitudinal, almost straight, the posterior slightly oblique or longitudinal and parallel with the anterior and extending to over about its middle; lateral teeth comparatively stout, their cusps pointed, the outer ones of the right valve small but well formed; ligament rather stout.

Size: Long 2.5, alt. 2-2.1, diam. 1.5 mill.

Long 2, alt. 1.6-1.7, diam. 1.2-1.4 mill.

Long 1.8, alt. 1.5, diam. 1.3.

Young: Long 1, alt. 0.8, diam. 0.3 mill.

Habitat : A pond near Garrettsville, Portage Co., Ohio ; a brook near Indian mounds, and a very small stream, Kent Co., Michigan.

In December, 1901, Mr. Geo. J. Streator collected several hundred specimens, most of them immature and young. They were regarded as a new species and named, but not published, waiting for more materials. Since then Dr. R. J. Kirkland has secured over three hundred specimens from the first named place in Michigan, and half a dozen from the latter. Last March Mr. Streator has again found a number of examples at Garrettsville, O. Most of the specimens were incrustated with a ferruginous or blackish coating, sometimes very thick.

This *Pisidium* is remarkable for the position of the beaks, which are not posterior, a feature also found with *Pis. medianum*. The species is somewhat variable in regard to size and shape ; the largest specimen seen was 2.7 mill. long, and moderately inflated. There is a more different form, found among the Ohio and Michigan specimens, averaging smaller, 1.7–2.0 mill. long, comparatively shorter, well inflated, with the anterior part a trifle longer than the posterior, the anterior end subangular, the supero-anterior slope being slightly marked, and the color is somewhat lighter.

In one specimen of the more typical form from Michigan, the beaks are low, flattened on top, or rather impressed, and with concentric, elevated ridges around the flattened areas, somewhat like those of *Pis. ferrugineum* Pr.

*Pis. mainense* n. sp.

. Published as *Pis. walkeri* St. var. *mainense* St. in the NAUTILUS, XII., p. 79. Since then numerous specimens were collected in Michigan by Dr. R. J. Kirkland from Reed Lake, Green Lake, Pine Island Lake and Little Bostwick Lake, and proved distinct from *P. walkeri*, which is widely distributed and fairly constant. *Pis. mainense* is considerably smaller, less elongate, less oblique, the anterior and posterior parts are less disproportionate in size. The hinge is of rather the same character as that of *walkeri*, but in the specimens examined from both Maine and Michigan, the left anterior cardinal tooth is rather longer, and the cusps of the laterals are more abrupt, especially so in the left valve.

Size : Long 3, alt. 2.6, diam. 2.

Long 3.5, alt. 3, diam. 2.3.

Long 3.7, alt. 3.1, diam 2.2 (L. Bostwick Lake).

The original specimens had been collected at several places in Aroostook Co., Me., by Mr. Olaf O. Nylander.

*Pis. costatum* n. sp. (fossil).

Mussel small, somewhat oblique, strongly inflated, with three or four concentric, prominent ridges on each valve; beaks rather posterior, large, much projecting over the hinge margin, flattened on top with a sharp, prominent concentric ridge around the flattened part; outline of the valves rather oval or ovoid, with the supero-anterior slope somewhat less curved, the anterior end subangular and the posterior end subtruncate; surface with fine, irregular striæ and lines of growth between the ridges; shell rather thin; hinge rather short, stout and compact, plate moderately broad, and short, cardinal teeth well formed, the right slightly curved, thicker at the posterior end, the left anterior large, almost straight, ascending obliquely and the lamella strongly curved up, its posterior part projecting over the inferior edge of the plate; the posterior rather parallel with the anterior and extending over about two-thirds of the latter; lateral teeth close to the cardinals and the ligament, short, those of the right valve stout, pointed, the outer ones very slight, especially so the anterior, the grooves short and deep, the left laterals moderately stout, high, pointed; ligament short and strong.

Size: Long 2.5, alt. 2.1 (with the beaks), diam. 2.3 mill.

Fossil in a marl bed at Monitor, Bay Co., Michigan, in company with other *Pisidia*, collected and sent for examination by Mr. Bryant Walker.

This species seems to stand near *Pis. ventricosum* Pr., but its beaks are less posterior, and the outlines are rather different. It also resembles *P. scholtzii* Cless. as described and figured, with the flattened beaks. This feature, however, does not seem to be constant. In two specimens of *P. scholtzii* which I owe to the kindness of Mr. Clessin, the beaks are slightly "calyculate," but not flattened on top. Also in a few younger valves of *P. costatum*, the beaks are less flattened, and the ribs slighter.

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#### A PROPOSED STUDY OF GONIOBASIS.

LAWRENCEBURG, IND., MAY, 1903.

EDITORS OF THE NAUTILUS :

For many years I have been under the impression that the infor-